

Case 3081

Alucita ochrodactyla [Denis & Schiffermüller, 1775] (currently *Gillmeria* or *Platyptilia ochrodactyla*; Insecta, Lepidoptera): proposed conservation of usage of the specific name by the designation of a neotype for *Phalaena tetradactyla* Linnaeus, 1758

D.J.L. Agassiz

The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.
(e-mail: david@agassiz.worldonline.co.uk)

Abstract. The purpose of this application is to conserve the specific name of the European plume moth (family PTEROPHORIDAE) *Gillmeria* (or *Platyptilia*) *ochrodactyla* ([Denis & Schiffermüller], 1775). An old specimen of *Phalaena tetradactyla* Linnaeus, 1758 is of this taxon, and it has recently been proposed that *ochrodactyla*, the name which has always been used, should be replaced by *tetradactyla*. However, the type status of this specimen is doubtful and *tetradactyla* has also been applied to two other species, now known as *Merrifieldia tridactyla* (Linnaeus, 1758) and *M. leucodactyla* ([Denis & Schiffermüller], 1775). It is likely that *tridactyla* and *tetradactyla* were synonyms when originally published, and it is proposed that the lectotype of *Phalaena tridactyla* Linnaeus, 1758 should be designated as neotype of *P. tetradactyla* and that the former should be selected as the valid specific name of the *Merrifieldia* taxon. This will both conserve *Gillmeria ochrodactyla* and eliminate the confused application of *tetradactyla* to more than one species.

Keywords. Nomenclature; taxonomy; Lepidoptera; Microlepidoptera; PTEROPHORIDAE; *Gillmeria ochrodactyla*; *Platyptilia ochrodactyla*; *Merrifieldia tridactyla*; *Merrifieldia leucodactyla*; plume moths.

1. This application concerns three plume moths in the family PTEROPHORIDAE, called here for convenience species A, B and C. Species A is placed in the subfamily PLATYPTILINAE and is known as *Gillmeria* (or *Platyptilia*) *ochrodactyla* ([Denis & Schiffermüller], 1775). Species B and C are superficially very similar to each other and are placed in the PTEROPHORINAE; they are now known as *Merrifieldia tridactyla* (Linnaeus, 1758) and *M. leucodactyla* ([Denis & Schiffermüller], 1775).

2. Species A is widespread in Europe, its larvae feeding on *Tanacetum* (tansy). Until 1993 it had always been known, in a very extensive literature, by the specific name *ochrodactyla*, attributed often to Hübner (1805, pl. 3) but also to the original authors Denis & Schiffermüller (1775, p. 145). Robinson & Nielsen (1983, p. 234) examined the Linnaean collection held by the Linnean Society of London and found a specimen of this species labelled as *Phalaena tetradactyla* (although the abdomen is from a *Leioptilus* species and is glued to the metathorax). They stated 'the labels on the above specimen are considered by the present authors to have been wrongly applied at some time in the past and we do not consider [it] to possess type status'; they did not replace *ochrodactyla* by *tetradactyla*.

3. Species B and C are also widespread in Europe; their larvae feed on *Thymus* (thyme) and related plants. B was known by the specific name *fuscolimbatus* Duponchel, 1845 (published in combination with *Pterophorus*), or sometimes *icterodactylus* Mann, 1855 (also published in *Pterophorus*), until Arenberger (1985, p. 244) examined the genitalia of the lectotype of the nominal species *Phalaena tridactyla* in the Linnean Society collection which had been designated by Robinson & Nielsen (1983, p. 234) and found it to be a specimen of species B (i.e. *fuscolimbatus*) rather than of species C, which had until then been called by the specific names *tridactyla* or *tetradactyla* (both of Linnaeus, 1758, p. 542). As a result of this discovery Arenberger (1985) transferred the name *tridactyla* to species B, replacing *fuscolimbatus*, and raised the name *leucodactyla* [Denis & Schiffermüller], 1775 from synonymy for species C (the *tridactyla* or *tetradactyla* of authors). He designated a neotype for the nominal species *Alucita leucodactyla* [Denis & Schiffermüller], 1775 (p. 146).

4. When changing the names of species B and C as above, Arenberger (1985) stated that '*Phalaena Alucita tetradactyla* L. is not to be considered a valid name for *tridactyla* auctt. [i.e. species C] because the type specimen turns out to be *Platyptilia ochrodactyla* D. & S., with an abdomen from a *Leioptilus* sp. glued to it'; in saying this he did not mention the doubt about the specimen which had been expressd by Robinson & Nielsen in 1983 (see para. 2 above). Arenberger did not explicitly apply the name *tetradactyla* to species A (*ochrodactyla*) but implied that this should be done. Gielis (1993) made this change and has been followed by some authors of regional lists (e.g. Huemer & Tarmann, 1993; Arenberger et al., 1995; Gielis, 1996; Karsholt & Razowski, 1996; Novák & Liška, 1997; de Prins, 1998) but not by others (e.g. Bond, 1995; Leraut, 1997; Bradley, 1998 & 2000; Karsholt & Nielsen, 1998; Buszko & Nowacki, 2000). However, inspection of the descriptions of *tetradactyla* in both 1758 and 1761 shows that the name cannot have applied to the platyptiliine species A (*ochrodactyla*) which is very different from B and C. The specific name of *Phalaena tetradactyla* Linnaeus, 1758 has been applied to all three of the species mentioned here: to species A (as a valid name by Gielis (1993, 1996) and some other recent authors mentioned above), to species B (in the synonymy of *tridactyla*) and to species C as a valid name (e.g. Spuler, 1910; Meyrick, 1928) or in the synonymy of *tridactyla* by many authors (see Robinson & Nielsen, 1983).

5. The confusion between the application of the names *tridactyla* and *tetradactyla* began with Linnaeus himself. In 1758 he (p. 542) described *Phalaena tridactyla* (*Phalaena* species no. 302) and *P. tetradactyla* (no. 303), with minor colour differences between them: the wings were respectively 'pallid with white lines' and 'yellowish' (with no mention of lines). In 1761 (pp. 370–371) he used the same words for *P. tetradactyla* ('lineis albis') that he had previously used for *P. tridactyla*. Stainton (1864, p. 12) mentioned this situation, and Tutt (1890) suggested that Linnaeus had perhaps described the male and female of the same taxon as distinct species. Tutt (1890, pp. 138–139) pointed out that the white lines of the species called *tridactyla* by Linnaeus in 1758 but *tetradactyla* in 1761 were characteristic of the female of the species then (1890) known as *Aciptilia tetradactyla*; this is species C, known as *Merrifieldia leucodactyla* since Arenberger (1985). Tutt was not familar with species B.

6. Since usage of the name *tetradactyla* has been thoroughly confused, it seems appropriate to place beyond dispute its probably original synonymy with *tridactyla*,

suggested by Tutt (1890) and accepted by Robinson & Nielsen (1983) and others. This can be done by designating the lectotype of *Phalaena tridactyla* established by Nielsen & Robinson (1983; see para. 3 above) as the neotype of *P. tetradactyla*; the simultaneously published objective synonym *tridactyla* can then be selected, under Article 24.2 of the Code, as the valid specific name for the taxon (species B, previously *fuscolimbata*) as adopted by Arenberger (1985; para. 3 above) and followed by subsequent authors. This action will protect the usage of the specific name of *Gillmeria* (or *Platyptilia*) *ochrodactyla* [Denis & Schiffermüller], 1775 for the platyptiliine species A which had been universal until Gielis (1993) adopted *tetradactyla* on the basis of a specimen which was probably not original (see para. 2 above).

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous fixations of name-bearing type for the nominal species *Phalaena tetradactyla* Linnaeus, 1758 and to designate as neotype the lectotype of *P. tridactyla* Linnaeus, 1758 designated by Robinson & Nielsen (1983);
- (2) to give the name *Phalaena tridactyla* Linnaeus, 1758 precedence over the name *P. tetradactyla* Linnaeus, 1758 (an objective synonym by the ruling in (1) above);
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *tridactyla* Linnaeus, 1758, as published in the binomen *Phalaena tridactyla* and as defined by the lectotype designated by Robinson & Nielsen (1983);
 - (b) *ochrodactyla* [Denis & Schiffermüller], 1775, as published in the binomen *Alucita ochrodactyla*;
 - (c) *leucodactyla* [Denis & Schiffermüller], 1775, as published in the binomen *Alucita leucodactyla* and as defined by the neotype designated by Arenberger (1985);
- (4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *tetradactyla* Linnaeus, 1758, as published in the binomen *Phalaena tetradactyla* (a junior objective synonym of *P. tridactyla* Linnaeus, 1758 by the precedence selected in (2) above).

References

Arenberger, E. 1985. Zur Synonymie einiger Pterophoridae (Lepidoptera). *Entomologische Zeitschrift*, **95**(17): 244–250.

Arenberger, E., Gaedike, R., Scholz, A. & Zangheri, S. 1995. Lepidoptera Urodoidea, Schreckensteinioidea, Epermenioidea, Alucitoidea, Pterophoroidea, Copromorphoidea. In: Minelli, A., Ruffo, S. & La Posta, S. (Eds.), *Checklist delle specie della fauna italiana*, no. 86. Calderini, Bologna.

Bond, K.G.M. 1995. Irish microlepidoptera check-list. *Bulletin of the Irish Biogeographical Society*, **18**: 176–262.

Bradley, J.D. 1998 (and 2000). *Checklist of Lepidoptera recorded from the British Isles*. 106 pp. Fordingbridge.

Buszko, J. & Nowacki, J. 2000. *The Lepidoptera of Poland, a distributional checklist*. 178 pp.

[**Denis, J.N.C.M. & Schiffermüller, I.J.**] 1775. *Ankündigung eines systematisches Werkes von den Schmetterlingen der Wiener Gegend*. 323 pp., 3 pls. Wien.

Gielis, C. 1993. Generic revision of the superfamily Pterophoroidea (Lepidoptera). *Zoologische Verhandelingen*, **290**: 1–139.

Gielis, C. 1996. Pterophoridae. In: Huemer, P., Karsholt, O. & Lyneborg, L. (Eds.), *Microlepidoptera of Europe*, vol. 1. 222 pp. Stenstrup.

Hübner, J. [1805]. *Sammlung europäischer Schmetterlinge*, vol. 8. Augsburg.

Huemer, P. & Tarmann, G. 1993. *Die Schmetterlinge Österreichs (Lepidoptera)*. 224 pp. Innsbruck.

Karsholt, O. & Nielsen, P.S. 1998. *Revised catalogue of the Lepidoptera of Denmark*. 144 pp. Copenhagen.

Karsholt, O. & Razowski, J. 1996. *The Lepidoptera of Europe, a distributional checklist*. 380 pp. Stenstrup.

Leraut, P.J.A. 1997. *Liste systématique et synonymique des lépidoptères de France, Belgique et Corse*, (Ed. 2). 526 pp. Paris.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Linnaeus, C. 1761. *Fauna Suecica, Editio altera*. xlvi, 578 pp. Stockholmiae.

Meyrick, E. 1928. *Revised Handbook of British Lepidoptera*. vi, 914 pp. London.

Novák, I. & Liška, J. 1997. Catalogue of the Bohemian Lepidoptera. *Klapalekiana*, **33**, Supplementum. 159 pp.

Prins, W. de. 1998. *Catalogue of the Lepidoptera of Belgium*. 236 pp. Brussels.

Robinson, G.S. & Nielsen, E.S. 1983. The Microlepidoptera described by Linnaeus and Clerck. *Systematic Entomology*, **8**: 191–242.

Spuler, A. 1910. *Die Schmetterlinge Europas*, vol. **2**. 523 pp. Stuttgart.

Stainton, H.T. 1864. A few words on the species of *Pterophorus* noticed by Linné. *Entomologist's Monthly Magazine*, **1**: 11–14.

Tutt, J.W. 1890. Notes on the synonymy of Haworth's 'Plumes'. *Entomologist's Record and Journal of Variation*, **1**: 90–91.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).